

Exploring the World's Oceans Course Syllabus

11:628:125 3 Credits Fall 2020

Instructor: Daphne Munroe

Course Website: This is a completely online course. The course website can be found on Canvas. <https://rutgers.instructure.com/courses/71776>

Course Summary

Welcome to Exploring the World's Oceans! This course is a general introduction to the global oceans. The course is entirely online, meaning that there is certain flexibility in when and where you do the course work. That flexibility means that you are solely responsible for keeping on schedule and making sure you complete all assignments on time (a full schedule is provided below). Regardless of whether you want to become an ocean scientist, a lawyer, business person or a teacher - the ocean will have a large impact on your life. The oceans regulate the planet's climate and weather, provide food and energy, and are fundamental to the global economy. Having an understanding and awareness of the ocean and its role in shaping our planet is important. This is especially true today more than ever, as your generation will face big decisions about how humanity will manage and use the world's oceans. This course will provide a broad overview of the history, chemistry, physics and biology of the oceans. Once you have a general ocean understanding, we move into a series of lectures that deal with some of the big policy issues your generation will deal with. Your final paper of the term will be focus on summarizing an ocean policy of your choice, and debating the pros and cons.

Lecture Schedule

Bold Blue text notes the major dates for quizzes and the paper.

Assignments will be found within each lecture.

DATE	FOCUS
September 1, 2020	Class Introduction & Navigation
September 3, 2020	Human Exploration of the Ocean
September 8, 2020	Birth of Oceanography
September 10, 2020	Formation of the Earth
September 15, 2020	Continental Drift
September 17, 2020	Plate Tectonics
September 22, 2020	Ocean Structures & the Seafloor
September 24, 2020	Water's Chemistry (why water is awesome!)
September 29, 2020	Salt in the Ocean
October 1, 2020	Ocean Currents and Tides
October 6, 2020	Light in the Ocean
October 8, 2020	Carbon Chemistry in the Ocean
October 13, 2020	(Quiz 1)
October 15, 2020	Phytoplankton
October 20, 2020	Zooplankton
October 22, 2020	Invertebrates (Approval of Policy Paper)
October 27, 2020	Fish
October 29, 2020	Marine Mammals
November 3, 2020	Deep Sea Communities

November 5, 2020	Fisheries & Aquaculture
November 10, 2020	(Quiz 2)
November 12, 2020	Changing Ocean (pH)
November 17, 2020	Changing Ocean (Law of the Sea)
November 19, 2020	Changing Ocean (Geoengineering)
December 1, 2020	Changing Ocean (Sea Level Rise)
December 3, 2020	Sea Monsters – Marine Creatures in Pop Culture
December 15, 2020	Policy Paper Due

Grade Breakdown

ITEM	NOTES	VALUE
Weekly Assignments	There will be a total of 10 weekly assignments. Do them ALL, on time! Late assignments will not be accepted. Each is short and based on the lecture. This is an easy way to get 25% of your grade just by keeping up.	25%
Quiz 1	Covers Lecture 1 through Light in the Ocean, inclusive. You must take this online on October 13 th (any time of the day you like, <u>must be complete before midnight EST</u>)- no exceptions. Open book.	20%
Approval of Policy Paper Topic	A brief explanation of your desired policy paper topic, why you chose it, and how you will go about researching it. Hand this in using the course website no later than October 22 nd .	5%
Quiz 2	Covers Carbon Chemistry through Deep Sea Communities, inclusive. Take this online on November 10 th (any time of the day you like, <u>must be complete before midnight EST</u>) no exceptions. Open book.	20%
Policy Paper	White paper on a marine policy. You will explain the policy, discuss pros and cons, and make a closing argument for or against. A detailed breakdown of required content and structure will be provided. Hand this in online no later than December 15 th .	30%
